WHAT IS CLAIMED IS:

1. A gas turbine control method for use on a gas turbine having multiple combustors and associated multiple fuel lines and values to at least one of said multiple combustors, said control method comprising:

independently tuning each of said fuel valves to each combustor to control nitrous oxide emissions to a target level produced by the sum of all combustors; and

fine tuning each of said fuel values to maintain dynamic pressure oscillations in all combustors within predetermined limits.

2. A gas turbine control method as claimed in claim 1, wherein said independently tuning comprises

measuring at least one of dynamic pressure oscillations and NO_x emissions from each of said combustors,

sensing fuel/air ratio variations from each of said combustors, and

tuning each of said fuel valves to enhance gas turbine output, emissions, dynamics and variation in combustor to combustor fuel/air ratio.

3. A gas turbine control method as claimed in claim 2, wherein said sensing fuel/air ratio variations from each of said combustors comprises sensing exhaust gas temperatures from each of said combustors.

4. A gas turbine control method, as claimed in claim 1, wherein said fine tuning comprises

identifying which one of said multiple combustors has peaked dynamic pressure oscillations within said predetermined limits, and

fine tuning the fuel delivered to each one of said multiple fuel valves associated with said one of said multiple combustors to decrease said peaked dynamic pressure oscillations.

5. A gas turbine control method for use on a gas turbine having multiple combustors and associated multiple fuel lines and valves to each one of said multiple combustors, said control method comprising:

measuring dynamic pressure oscillations and NO_x emissions from each of said multiple combustors;

sensing fuel/air ratio variations from each of said multiple combustors;

tuning each of said fuel valves to enhance fuel/air ratio variations across said multiple combustors;

identifying which one of said multiple combustors has maximum dynamic pressure oscillations; and

fine tuning the fuel delivered to each one of said multiple fuel valves associated with said one of said multiple combustors having maximum dynamic pressure oscillations to thereby decrease said maximum dynamic pressure oscillations while at the same time maintaining said NO_x emissions at a low level.

6. A gas turbine control method as claimed in claim 5, wherein said sensing fuel/air ratio variations from each of said combustors comprises sensing exhaust gas temperatures from each of said combustors.

7. A gas turbine control method as claimed in claim 5, further comprising continuously repeating said identifying and fine tuning steps to maximize output performance, while meeting emission requirements and dynamic pressure limits of the gas turbine.

8. A gas turbine control method for use on a gas turbine having multiple combustors and associated multiple fuel lines and valves to each one of said multiple combustors, said control method comprising:

determining an acceptable standard for combustion pressure dynamics for said multiple combustors;

determining an acceptable standard for NO_X emissions from said multiple combustors;

determining an acceptable standard for variation in combustor to combustor fuel/air ratio from said multiple combustors;

controlling fuel flow to said multiple valves so as to enhance combustion pressure dynamics, NO_X emissions, and fuel/air ratio variations from said multiple combustors; and

at base load of said gas turbine, further controlling fuel flow to said multiple valves so as to adjust NO_X emissions to said acceptable standard for NO_X emissions.

9. A gas turbine control method as claimed in claim 8, wherein said setting an acceptable standard for variation in combustor to combustor fuel/air ratio comprises setting an acceptable standard for exhaust temperature from each of said multiple combustors.

10. A gas turbine control method for use on a gas turbine having multiple combustors and associated multiple fuel lines and valves to each one of said multiple combustors, said control method comprising:

determining an acceptable standard for combustion pressure dynamics for said multiple combustors;

determining an acceptable standard for NO_X emissions from said multiple combustors;

determining an acceptable standard for fuel/air ratio variations from said multiple combustors;

controlling fuel flow to said multiple valves so as to enhance combustion pressure dynamics, NO_X emissions, and fuel/air ratio variations from said multiple combustors; and

at partial load of said gas turbine, further controlling fuel flow to said multiple valves so as to maintain said fuel/air ratio variation standard.

11. A gas turbine having a plurality of chambers, each one of said chambers comprising:

at least one combustion reaction zone receiving air from a compressor and fuel from a fuel distributor;

said fuel distributor having a fuel trim orifice and a fuel trim valve, said fuel trim valve for said each one of said chambers being individually adjustable to trim the flow of fuel to the chamber;

a pressure sensor detecting a dynamic gas pressure in the chamber;

a fuel/air ratio sensor for detecting the variation in fuel/air ratio from said plurality of chambers; and

a computer controller coupled to said fuel trim valves and said sensors for operatively adjusting the fuel trim valve to optimize the dynamic gas pressure detected by the pressure sensor and the variation in fuel/air ratio detected by the fuel/air ratio sensor and for further adjusting the fuel trim valve for each one of said chambers to maintain said variation in fuel/air ratio at a predetermined level.

12. A gas turbine as claimed in claim 11, said fuel/air ratio sensor comprising a plurality of thermocouples for sensing the chamber temperature of each one of said plurality of chambers.

13. A gas turbine having a plurality of chambers, each one of said chambers comprising:

at least one combustion reaction zone receiving air from a compressor and fuel from a fuel distributor;

said fuel distributor having a fuel trim orifice and a fuel trim valve, said fuel trim valve for said each one of said chambers being individually adjustable to trim the flow of fuel to the chamber;

a pressure sensor detecting a dynamic gas pressure in the chamber;

a fuel/air ratio sensor for detecting the variation in fuel/air ratio from said plurality of chambers; and

a computer controller coupled to said fuel trim valves and said sensors for operatively adjusting the fuel trim valve to optimize the dynamic gas pressure

detected by the pressure sensor and the variation in fuel/air ratio detected by the fuel/air sensor and for further adjusting the fuel trim valve for each one of said chambers to maintain NO_x emissions at a predetermined level.

14. A gas turbine as claimed in claim 13, said fuel/air ratio sensor comprising a plurality of thermocouples for sensing the chamber temperature of each one of said plurality of chambers.

15. A control system for a gas turbine having multiple combustors and associated multiple fuel lines and valves to at least one of said multiple combustors, said control system comprising:

at least one pressure sensor for detecting dynamic gas pressure in said multiple combustors;

at least one fuel/air ratio sensor for detecting variation in fuel/air ratio between said multiple combustors;

a computer controller coupled to said multiple fuel valves and said sensors for operatively adjusting said multiple fuel valves to enhance the dynamic gas pressure detected by said at least one pressure sensor and to enhance the variation in fuel/air ratio detected by said at least one fuel/air ratio sensor and for further adjusting said multiple fuel valves to maintain the variation in fuel/air ratio at a predetermined level.

16. A control system as claimed in claim 15, said at least one fuel/air ratio sensor comprising at least one thermocouple for sensing chamber temperature of at least one of said multiple combustors.

17. A control system for a gas turbine having multiple combustors and associated multiple fuel lines and valves to at least one of said multiple combustors, said control system comprising:

at least one pressure sensor for detecting dynamic gas pressure in said multiple combustors;

at least one fuel/air ratio sensor for detecting variation in fuel/air ratio between said multiple combustors;

a computer controller coupled to said multiple fuel valves and said sensors for operatively adjusting said multiple fuel valves to enhance the dynamic gas pressure detected by said at least one pressure sensor and to enhance the variation in fuel/air ratio detected by said at least one fuel/air ratio sensor and for further adjusting said multiple fuel valves to maintain NO_x emissions at a predetermined level.

18. A control system as claimed in claim 17, said at least one fuel/air ratio sensor comprising at least one thermocouple for sensing chamber temperature of at least one of said multiple combustors.

19. A control system for a gas turbine having multiple combustors and associated multiple fuel lines and valves to at least one of said multiple combustors, said control system comprising:

pressure sensor means for detecting dynamic gas pressure in said multiple combustors;

fuel/air ratio sensor means for detecting variation in fuel/air ratio between said multiple combustors;

computer controller means coupled to said multiple fuel valves, said pressure sensor means and said fuel/air ratio means for operatively adjusting said multiple fuel valves to enhance the dynamic gas pressure detected by said pressure sensor means and to enhance the variation in fuel/air ratio detected by said fuel/air ratio sensor means and for further adjusting said multiple fuel valves to maintain the variation in fuel/air ratio at a predetermined level.

20. A control system as claimed in claim 19, said fuel/air ratio sensor means comprising at least one thermocouple for sensing chamber temperature of at least one of said multiple combustors.

21. A control system for a gas turbine having multiple combustors and associated multiple fuel lines and valves to at least one of said multiple combustors, said control system comprising:

pressure sensor means for detecting dynamic gas pressure in said multiple combustors;

fuel/air ratio sensor means for detecting variation in fuel/air ratio between said multiple combustors;

computer controller means coupled to said multiple fuel valves, said pressure sensor means and said fuel/air ratio means for operatively adjusting said multiple fuel valves to enhance the dynamic gas pressure detected by said pressure sensor means and to enhance the variation in fuel/air ratio detected by said fuel/air ratio sensor means and for further adjusting said multiple fuel valves to maintain NO_x emissions at a predetermined level.

22. A control system as claimed in claim 21, said fuel/air ratio sensor means comprising at least one thermocouple for sensing chamber temperature of at least one of said multiple combustors.